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Biotechnology Notes

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Biotechnology Notes, a compilation of agency activities, news events, and upcoming meetings, is prepared for members of the U.S. Department of Agriculture's (USDA) Committee on Biotechnology in Agriculture (CBA) by USDA's Office of Agricultural Biotechnology (OAB).

INSIDE USDA

RISK ASSESSMENT METHODOLOGIES CONFERENCE

From June 22-25, 120 representatives of U.S. regulatory agencies, researchers and interested members of the public participated in the "First International Conference on Risk Assessment Methodologies" held in College Park, MD. The Conference was organized by the Maryland Biotechnology Institute, with funding support from USDA, EPA and Environment Canada.

The conference brought together federally funded researchers to report on risk assessment research and to exchange views on current issues and problems with representatives of regulatory agencies. These annual presentations allow the regulatory community to assess the directions and efficacy of the federally supported work.

Representatives from USDA, EPA and Canada opened the conference with papers on their agencies' perspectives on risk assessment. In addition, a representative from the Environmental Defense Fund gave an environmentalist's perspective.

Researchers addressed the following topics: Gene Transfer; Gene Stability and Expression; Model Development; Field Risk Assessments; Environmental Effects; and Monitoring.

Invited dinner speakers were Dr. Jane Rissler from the Union of Concerned Scientists and Dr. Peter Day of Rutgers University. Rissler spoke on "The Risk Assessment Value of Field Test Data." Day's talk was entitled "Risk Assessment: A Meaningful Dialogue."

A description and demonstration of the USDA's NBIAP Information System for Biotechnology concluded the presenters' portion of the program.

A proceedings of the conference will be published shortly. For additional information contact the following: Dr. M. Levin (U. of MD.) at 301 405-1056, Dr. D. MacKenzie (USDA) at 202-401-4892, or Dr. E. Milewski (EPA) at 202-260-6900.

JULY BRINGS A LONG-AWAITED DOCUMENT!

A document of great importance to the agricultural recombinant DNA research community was published Tuesday July 5, 1994, culminating efforts that were begun by USDA in 1986-1987. It came just one day short of the 18th anniversary of the first "Recombinant DNA Research Guidelines" and is the first revision of the NIH Guidelines since 1986. In the new Federal Register Document, Part III--"Recombinant DNA Research: Actions Under the Guidelines; Notice" (p. 34472-34494), the Director of NIH officially accepted Appendices P and Q that describe containment conditions for experiments with recombinant DNA-containing plants, large animals and microorganisms associated with them.

It also promulgated new Guidelines (p. 34496-34547) that suggest containment levels for different levels of potential risk. This is a great benefit both to researchers and to Institutional Biosafety Committees charged with setting these containment conditions under the 1986 Guidelines and who have relied on unofficial draft versions until now.

The new document includes background information that research scientists who are genetically engineering plants and large animals can now turn to in Appendices P and Q for guidelines that address containment and safety concerns.

The document also includes background information on the decision making process, and gives a Summary of Actions for all of the amendments to the Guidelines, including several human gene therapy actions. Additional information can be obtained from Dr. Nelson Wivel, Director, Office of Recombinant DNA Activities (ORDA), Office of Science Policy and Technology Transfer, NIH, Building 31 room 4B11, Bethesda, MD 20892. Tel: 301-496-9838.

TEMPORARY EDITOR FOR BIOTECH NOTES

While Ms. Marti Asner is on a three month leave of absence, Jean Larson will be the fill-in editor of Biotechnology Notes. Larson is on a half time-detail from the USDA's National Agricultural Library where she is the Coordinator of the Animal Welfare Information Center. Larson can be reached at 703-235-4419 or via Internet at jl Larson@nal.usda.gov.

NEW PUBLICATION ON ECONOMIC PERSPECTIVES ON AG BIOTECH

USDA authors M.F. Caswell, K.O. Fuglie and C.A. Klotz, have recently published a 52 page report entitled "Agricultural Biotechnology: An Economic Perspective." The report "describes the economic, scientific, and social factors that will influence the future of biotechnology in agriculture." It shows that both private and public sector research and development are contributing significantly to the development of biotechnologies. Consumer acceptance of biotechnology products will be the motivating force in whether agricultural biotechnology innovations will be developed and finally adopted by farmers.

The authors reviewed 23 published studies on the economic effects of agricultural biotechnology. They reached two major conclusions: (1) the "economic impact of the new biotechnology is likely to be incremental rather than dramatic" and (2) a "significant amount of economic benefits will be broadly distributed to consumers in increased supplies, lower prices and higher valued products."

To request this title, dial 1-800-999-6779 (non-U.S. call 1-703-834-0125). The cost is \$9.00. The cost can be charged to Visa or MasterCard, or send a check (payable to ERS-NASS). The mailing address is: ERS-NASS, 341 Victory Drive, Herndon, VA 22070.

GOPHER TO NBIAP

If you enjoy roaming around electronic gopher holes, you can burrow into the National Biological Impact Assessment Program's set of databases via a gopher on Internet. The procedures are as follows:

Via gopher--

After logging in type "gopher ftp.nbiap.vt.edu"

Via anonymous ftp--

1. After logging on type "ftp ftp.vt.edu"
2. At the name prompt type "anonymous" as your id. ENTER and type your e-mail address as your password.
3. Type "cd pub/biotechnology" press ENTER
4. Type "ls" for a listing of files and directories.
5. "quit" is used to exit the system.

To get better acquainted with the system, it is suggested that the user download and read the file "README". It can be downloaded as follows: type "README.NDX".

DID YOU KNOW--

You too can tap into USDA's AgNews FAX service? All it takes is a touchtone phone and a fax machine to have access to USDA news releases, summaries of "Outlook and Situation Reports" from the Economic Research Service, fact sheets on USDA agencies and programs, and biographical information on high ranking USDA officials.

Instructions: Using the fax phone, dial 202-690-3944 and follow the voice commands, or print out a set of detailed instructions first by pressing 9 on the telephone and hit the start button on the fax machine.

NEW BIBLIOGRAPHIES FROM NAL'S BIOTECHNOLOGY INFORMATION CENTER

Three new biotechnology publications in the quick bibliography series are now available from the Biotechnology Information Center at USDA's National Agricultural Library. Titles include:

Biotechnology: Commercialization and Economic Aspects (QB 94-20)

Biotechnology: Legislation and Regulation (QB 94-33)

Transgenic Animals (QB 94-34)

Each of the bibliographies contain over 200 citations and abstracts (where available) from the Agricola database. To request a complimentary copy of any of these titles, or for more information about BIC, contact them at: Biotechnology Information Center/NAL, 10301 Baltimore Blvd., Beltsville, MD 20705-2351. These documents are also available electronically via the Internet; contact BIC at biotech@nalusda.gov for more information.

NEWS AROUND THE NATION (AND THE WORLD)

INTELLECTUAL PROPERTY RIGHTS WORKSHOP

Fifty people from around the world explored issues of intellectual property rights (IPR) at a workshop held in Washington, D.C. July 11-14. The workshop which was sponsored by the U.S. Agency for International Development's Agricultural Biotechnology for Sustainable Productivity Project focused on the IPR needs of developing nations (Brazil, Costa Rica, Egypt, Indonesia, Kenya, Morocco, and Thailand were represented) and developed countries. It was organized by Professor John Barton of Stanford University's Law School. Barton is a recognized expert in IPR issues as they affect biotechnology in the global agricultural setting.

A variety of topics was discussed including; which technologies are appropriately and effectively covered by patents and which are not; how patent protection stimulates technological innovation and the development of new products; a survey of agricultural patent policy issues and advice to developing countries as they develop such policies; and the harmonization of international patent policy laws. Representatives of the developing nations also gave an update on IPR in their respective countries.

For more information contact Judith Chambers of USAID. Tel: 703-875 4219.

BIOTECHNOLOGY IN SPACE--EXPLORING THE EFFECTS OF WEIGHTLESSNESS

A number of life science research experiments took place inside the Space Shuttle Columbia during it's 2nd International Microgravity Laboratory (IML-2) mission July 8-23. NASA and it's seven international partners conducted experiments on the effects of weightlessness on human and animal cells, yeast, bacteria, fruit flies, sea urchins, newts, jellyfish and plant seedlings. They used a carefully designed, multipurpose habitat, the Biorack, for handling and preserving samples. The scientists studied five phenomena: the immune system, the skeletal system, organism development, alterations in plant development alterations, and radiation damage and cellular repair.

Aquatic animals were also on board. Fish and small amphibia were swimming in the specially designed Aquatic Animal Experiment Unit. They were videotaped to record observations of behavior and growth.

For more information on this fact finding mission, contact Ed Campion at the NASA, Washington D.C. headquarters at 202-358-1778.

MULTIMEDIA PROJECT FOR EGYPTIAN HIGH SCHOOLS

Professor Abolghasem Shahbazi, an engineer at North Carolina A & T State University is spearheading a 2 year, \$200,000 project to bring multimedia, computerized education to high schools in Egypt.

CD ROMs and computer software will focus on four areas--biology, chemistry, physics, and geography. The biology oriented modules will include such topics as microbial cell division, chemical bonds and biotechnology.

For more information, please contact Dr. Shahbazi at the Department of Natural Resources and Environmental Design, NC A&T State University, Greensboro, N.C. 27420-1928. Tel: 910-334-7787.

NEW PUBLICATIONS

- *Guide to U.S. Food Safety Law.* Published by the Thompson Publishing Group. For more information call 1-800-925-1878.
- *The Brave New World of Animal Biotechnology.* by S. Donnelley, C.R. McCarthy and R. Singleton, Jr. This is a Special Supplement to the *Hastings Center Report*. 24, no. 1. Published by The Hastings Center 255, Elm Road, Briarcliff Manor, NY 10510.
- *Balancing Radiation Benefits and Risks. The Needs of an Informed Public.* A report by the Subpanel on Public Education of the Committee on Interagency Radiation Research and Policy Coordination (CIRRPC). Copies may be obtained by requesting publication number ORAU 94/F29 from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.
- *Biotechnology: Research Program Overview.* This report, EPA 600/K-93/007, January 1994, is from the EPA's Office of Research and Development. Comments or questions regarding this report should be directed to: Dr. Richard Coffin, Environmental Research Laboratory, EPA, 1 Sabine Island Drive, Gulf Breeze, FL 32561-5299.
- *Comments to the U.S. Department of Agriculture on an Environmental Assessment and Finding of No Significant Impact for Genetically Engineered Virus-Resistant Squash, July 7, 1994.* Prepared by Jane Rissler, Ph.D. and Margaret Mellon, Ph.D., J.D. of the Union of Concerned Scientists. For a copy contact the Union at 1616 P. Street, NW, Suite 310, Washington, DC 20036. Tel.: 202-332-0900

UPCOMING MEETINGS

- Aug. 6-10:** American Phytopathological Society Annual Meeting. Albuquerque, New Mexico. Write to APS, 3340 Pilot Knob Rd., St. Paul, MN 55121.
- Aug. 8-12:** International Marine Biotechnology Conference '94. Tromso, Norway. For details write to Harlyn O. Halvorson, Director, Policy Center for Marine Bioscience and Technology, University of Massachusetts Dartmouth, Dartmouth, MA 02747-2300; FAX: 508-999-8901.
- Aug. 11-12:** Combinatorial Libraries: Creating Molecular Diversity. Will be held in San Francisco, California. Contact IBC USA Conferences at 508-481-6400. FAX: 508-481-7911.
- Aug. 15-19:** A course on fermentation technology. Sponsored by the

Aug. 15-19: A course on fermentation technology. Sponsored by the Massachusetts Institute of Technology, Cambridge, MA. Contact Arnold Demain at 617-253-1711; FAX: 617-253-8550; E-mail: demain@mit.edu

Aug. 16-19: "Plant Biotechnology Methods." University Park Pennsylvania. Contact Penn State Biotechnology Institute, 519 Wartik Laboratory, University Park, PA 16802. Tel: 800-833-5533.

Aug. 22: A session of the American Chemical Society annual meeting entitled "Safety Aspects of Flavors and Foods Produced by Genetically Modified Plants and Organisms." The session will be held from 9:00 am to 12:00 pm in the Conference Theater of the Grand Hyatt in D.C. For additional information call 703-235-4419.

Sept. 11-14: "The Methodology of Plant Genetic Manipulation." Cork, Ireland. Fax 353-21-274420.

Sept. 20-23: "Scale-Up Strategies for Animal Cell Culture." Contact Penn State Biotechnology Institute, 519 Wartik Laboratory, University Park, PA 16802. Tel: 800-833-5533.

Oct 2-6: "1994 Second International Symposium on the Applications of Biotechnology to Tree Culture, Protection, and Utilization." The conference will be held in Bloomington, MN. The registration address is: Edith Franson, Executive, Tree Biotechnology Symposium, Forestry Sciences Lab, PO Box 898, 5985 Highway K, Rhinelander, WI 54501 USA.

Oct. 2-6: "Bioenergy '94." The sixth national bioenergy conference. The conference will be hosted by The Western Regional Biomass Energy Program and will be held in Reno/Sparks, Nevada. Contact Consuelo Bennett at 510-284-3780.

Oct. 10-14: "Fungal Biotechnology Course." Loch Lomond, Scotland. Contact Ms. E. Clemens, Dept of Bioscience and Biotechnology, University of Strathclyde, 204 George St., Glasgow, G1 1XW, UK. Tel: 041-552-4400 ex. 2085. FAX: 041-533-1161

Course

Nov. 13-16: "The Third International Symposium on The Biosafety Results of Field Tests of Genetically Modified Plants and Microorganisms." This symposium, being sponsored by a number of U.S and international organizations will be held in Monterey, California. For more information contact Ms. Marylyn Cordle at FAX: 703-235-4429. For registration information contact Ms. Pat Day at the University of California at FAX: 510-451-2317.

Biotechnology Notes is written by Marti Asner, public affairs specialist in USDA's Office of Agricultural Biotechnology. Any comments or suggestions may be sent to USDA/OAB, Room 1001, Rosslyn Plaza-E, 14th and Independence Ave., S.W., Washington, DC 20250-2200. Telephone: 703-235-4419; Fax: 703-235-4429; e-mail: masner@csrs.esusda.gov. This news publication is also accessible on Internet via Gopher.

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